



Program Highlights

Benefits/Cost Savings

- Cost savings:
approximately \$6,500
- 42% recycling rate
- 24 tons recycled/salvaged

Materials Salvaged

- 400 10-foot studs
- 1 ton of relites in frames
- 35 doors, pre-hung
- 700 square feet of
acoustical ceiling tile

Materials Recycled

- 1.5 tons of ceiling grids,
light troffers, conduit
- 1.5 tons of misc. metal
and cable/copper
- 14.7 tons of drywall

Salvaged Materials

Used in the Remodel include:

- Plumbing accessories
(including sinks, mirrors,
faucets and grab bars)
- 57 light troffers
- 2 each fire extinguishers
and cabinets
- 6 each doors, pre-hung
- 5 relites in frames
- 17 HVAC diffusers

Project Statistics

- Size: 10,000 square feet
- Location: Bellevue, WA

General Contractor

Rafn Construction
1721 132nd Ave NE
Bellevue WA 98005
(206) 702-6600



The large daylight area (above) is home to Rafn accounting staff who rarely go into the field. Rafn saved on material costs by leaving ceilings exposed (top right). Hand demolition allowed for several relights in frames (middle right) to be salvaged. Salvaged fluorescents (bottom right) hung upside-down provide diffused lighting.

Flexibility Saves \$6,500

When the Rafn Company, a construction company located in Bellevue, needed a new corporate office and workshop, they chose a conventional looking office building with a small workshop. They left the structure and exterior intact, and gutted and remodeled the whole interior. Their commitment to reducing, reusing, and recycling is evident in the way Rafn went about this job from beginning to end.

Demolition: Human versus Machine

Ann Schuessler, project superintendent, had to decide whether the savings in disposal fees would offset the extra labor it would take to demolish the interior by hand or if they should rent a couple of bobcats and demolish it mechanically. They chose hand demo-

lition, and including the extra labor costs, ended up saving \$850 in disposal fees. Not only that, Rafn ended up with just under \$5,000 worth of salvaged items including doors, intercoms, acoustical ceiling tile, and HVAC diffusers all of which were reused in the remodel.

"When we decided to demolish the interiors by hand, and recycle and reuse the most obvious things, we thought we would come out even cost-wise. We were surprised by how much we ended up saving."

— Ann Schuessler
Superintendent, Rafn Company

Salvaging Tips

Minimize the number of times you move things. 200 studs quickly disappeared when Rafn workers piled them in the parking lot with a "free wood" sign. A truckload of doors and interior windows were taken to the Phinney Ridge Materials Center and Second Use Building Supply. Items intended for the remodel were stored on-site in an existing workshop, minimizing the transportation and handling costs.

Go for the easy things – don't try to salvage everything. Doors, casings, and hardware were salvaged and reused as pre-hung units. Plumbing accessories including sinks, mirrors, and faucets were simply unbolted, cleaned, and reused. Easily damaged things like acoustical tile, would not have been cost-effective to reuse without convenient on-site storage.

Be flexible in the design – use what you have on hand. When the design called for a door with a left-hand swing, Rafn substituted a salvaged right-hand door. A sliding divider wall separating two parts of a conference room was fabricated from salvaged hollow-core doors, and covered with homasote, a non-toxic interior paneling made from recycled newspapers. Electrical contractor Steve Marvich had 57 light fixtures which were salvaged from another demolition project and incorporated into the lighting design for this job.

Other Waste Reduction Strategies

Part of Rafn's strategy was to reduce the amount of material used on the project in the first place. Rafn eliminated a finished floor covering by exposing and tinting the concrete slab floor. A dropped ceiling was eliminated in most of the building, revealing mechanical and electrical ducts and conduits, and creating a more spacious and open look. The Rafn building showcases the materials that Rafn uses every day, and makes a strong case for a common sense approach to waste reduction.

King County Offers Free Technical Assistance to Construction, Demolition and Landclearing Contractors

- Assistance developing comprehensive job-site waste management plans
- *Construction/Recycling Directory* - a listing of area recyclers
- *Contractors' Guide to Preventing Waste and Recycling* - a how-to guide
- Case studies highlighting successful job-site programs
- *WasteSpec** - a manual of model specifications for construction waste reduction, reuse and recycling. This manual provides architects and engineers model specification language for job-site recycling.
- Examples of contract language specifying recycling and waste management requirements from job-sites throughout King County
- Green Works/Construction Works public recognition program

* Developed by Triangle J Council of Governments; cost \$25.00

**Call the King County Solid Waste Division
at (206) 296-8480 for assistance.**

For more information:

King County

*King County Construction
Recycling Directory*
and other technical assistance:
Theresa Koppang
*King County
Solid Waste Division*
(206) 296-8480

City of Seattle

*Business and Industry
Recycling Venture*
(206) 389-7304

General Contractor

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It's Good Business